

ANNEX  
BETWEEN  
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
GEORGE C. MARSHALL SPACE FLIGHT CENTER  
AND  
SIERRA NEVADA CORPORATION  
UNDER SPACE ACT UMBRELLA AGREEMENT  
NO. SAA8-2027540, DATED \_\_\_\_\_  
ANNEX NUMBER SAA8-2027540.1

ARTICLE 1. PURPOSE

This Annex shall be for the purpose of collaboration in the review of design approaches and manufacturing of major components for a unique, specialized application to a revolutionary rocket engine design.

The legal authority for this Annex, consistent with the Umbrella Agreement, is in accordance with the National Aeronautics and Space Act (51 U.S.C. § 20113(e)).

ARTICLE 2. RESPONSIBILITIES

A. NASA MSFC will use reasonable efforts to:

1. Communicate technical information to SNC through monthly meetings and phone calls.
2. Support design review meetings as scheduled.
3. Review rocket engine technical data and advise the Partner on component design parameters.
4. Consult with Partner on analysis of parts produced using advanced manufacturing techniques.
5. Review data from component manufacturing suppliers for suitability for rocket engine application.
6. Provide inputs to Partner for testing components and related sub-systems for developing the engine components.
7. Provide summary report to document analysis, recommendations, and related comments.

B. SNC will use reasonable efforts to:

1. Establish regularly scheduled meetings and phone calls to allow support by NASA.
2. Provide data on engine design and performance parameters necessary to develop manufacturing recommendations.
3. Provide manufacturing information on valves and related systems.
4. Provide test plans for engines and component sub-systems for review.
5. Provide test data to NASA for review.

### ARTICLE 3. SCHEDULE AND MILESTONES

The planned major milestones for the activities for this Annex defined in the "Responsibilities" Article are as follows:

- |   |                            |
|---|----------------------------|
| 1. SNC to provide engine design and performance data                  | Effective Date + 3 months  |
| 2. MSFC to provide component design and manufacturing recommendations | Effective Date + 6 months  |
| 3. SNC to provide test requirements document for review               | Effective Date + 9 months  |
| 4. NASA to provide summary report                                     | Effective Date + 11 months |

### ARTICLE 4. FINANCIAL OBLIGATIONS

A. Partner agrees to reimburse NASA an estimated cost of \$55,514 for NASA to carry out its responsibilities under this Annex.

Each payment shall be marked with NASA MSFC and SAA8-2027540.1.

B. NASA will not provide services or incur costs beyond the current funding. Although NASA has made a good faith effort to accurately estimate its costs, it is understood that NASA provides no assurance that the proposed effort under this Annex will be accomplished for the estimated amount. Should the effort cost more than the estimate, Partner will be advised by NASA as soon as possible. Partner shall pay all costs incurred and have the option of canceling the remaining effort, or providing additional funding in order to continue the proposed effort under the revised estimate. Should this Annex be terminated, or the effort completed at a cost less than the agreed-to estimated cost, NASA shall account for any unspent funds within one year after completion of all effort under this Annex, and promptly thereafter, at Partner's option return any unspent funds to Partner or apply any such unspent funds to other activities under the Umbrella Agreement. Return of unspent funds will be processed via Electronic Funds Transfer (EFT) in accordance with 31 C.F.R. Part 208 and, upon request by NASA, Partner agrees to complete the Automated Clearing House (ACH) Vendor/Miscellaneous Payment Enrollment Form (SF 3881).

### ARTICLE 5. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

A. Data produced under this Annex which is subject to paragraph C. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement will be protected for the period of two years.

B. Under paragraph H. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement, Disclosing Party provides the following Data to Receiving Party.

The lists below may not be comprehensive, are subject to change, and do not supersede any restrictive notice on the Data provided.

1. Background Data:

The Disclosing Party's Background Data, if any, will be identified in a separate technical document.

None

2. Third Party Proprietary Data:

The Disclosing Party's Third Party Proprietary Data, if any, will be identified in a separate technical document.

None

3. Controlled Government Data:

The Disclosing Party's Controlled Government Data, if any, will be identified in a separate technical document.

None

4. The following software and related Data will be provided to Partner under a separate Software Usage Agreement:

None

#### ARTICLE 6. TERM OF ANNEX

This Annex becomes effective upon the date of the last signature below ("Effective Date") and shall remain in effect until the completion of all obligations of both Parties hereto, or two years from the Effective Date, whichever comes first, unless such term exceeds the duration of the Umbrella Agreement. The term of this Annex shall not exceed the term of the Umbrella Agreement. The Annex automatically expires upon the expiration of the Umbrella Agreement.

#### ARTICLE 7. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Annex by providing thirty (30) calendar days written notice to the other Party.

#### ARTICLE 8. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Annex.

##### Technical Points of Contact

NASA George C. Marshall Space Flight Center  
Paul Gradl  
Propulsion Engineer  
Mail Suite: ER13  
Marshall Space Flight Center, AL 35812  
Phone: 256-544-2455

SIERRA NEVADA CORP  
Brian Pomeroy  
Lead Propulsion Engineer  
1212 Fournier Drive  
Madison, WI 53717  
Phone: 608-229-2774  
brian.pomeroy@sncorp.com

paul.r.gradl@nasa.gov

#### ARTICLE 9. MODIFICATIONS

Any modification to this Annex shall be executed, in writing, and signed by an authorized representative of NASA and the Partner. Modification of an Annex does not modify the terms of the Umbrella Agreement.

#### ARTICLE 10. SIGNATORY AUTHORITY

The signatories to this Annex covenant and warrant that they have authority to execute this Annex. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND  
SPACE ADMINISTRATION  
GEORGE C. MARSHALL SPACE  
FLIGHT CENTER

SIERRA NEVADA CORP

BY: \_\_\_\_\_  
Joe L. Leopard  
Director Engineering Directorate

BY: \_\_\_\_\_  
Andrea M. Laskowski  
Director, Supply Chain Management

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_